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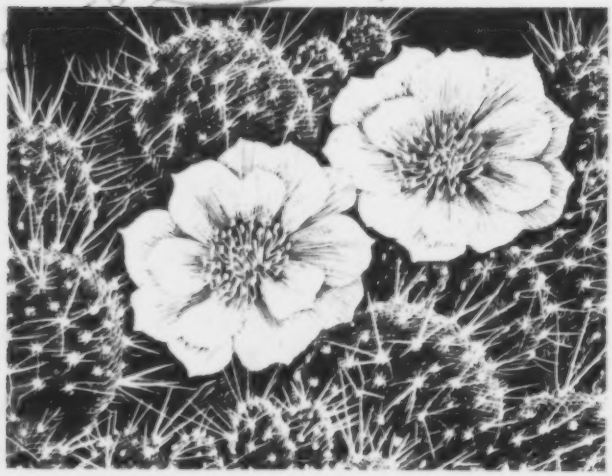
BRITISH COLUMBIA PROVINCIAL MUSEUM
DEPARTMENT OF RECREATION AND CONSERVATION

HANDBOOK No. 20



GUIDE TO
Common Edible Plants
OF BRITISH COLUMBIA

By Adam F. Szczawinski and George A. Hardy

Illustrations by Frank L. Beebe

VICTORIA, B.C. APRIL, 1962

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1962

FOREWORD

Since it was first issued almost twenty years ago, the introductory number in the Handbook Series " Fifty Edible Plants of British Columbia," by G. A. Hardy, has been in rather constant demand, and as a consequence there have been numerous reprints. It seems that, despite the increasing availability of foodstuffs in almost infinite variety and many ready for instant use, people are still interested in foods provided by nature, presumedly because of their relative novelty.

There is also a more practical value in having knowledge of edible plants. Because such a large part of our Province is unsettled and relatively inaccessible, fishermen, hunters, prospectors, airmen, and other adventurers may find themselves suddenly dependent upon the food resources of the country for their survival, and in the event of a national emergency this plight may be greatly extended.

Because of these continuing demands, Dr. Szczawinski has joined with Mr. Hardy, now retired, to produce an entirely new guide to the edible plants, augmented with new data and with new illustrations. A few species of doubtful value have been omitted and a number of additional plants have been added, particularly some from the northern section of the Province, which was not well represented previously. It appears as No. 20 in the Handbook Series.

G. CLIFFORD CARL.

BRITISH COLUMBIA
DISTRIBUTION MAP
BRITISH COLUMBIA PROVINCIAL MUSEUM
Scale of Miles
0 50 100 200
132°
128°
124°
120°
116°
60°
56°
52°
50°
54°
58°
130°
126°
122°
118°
114°
DATLIN
TELEGRAPH CREEK
Cassiar
District
Rocky
Mountains
Peace
River
District
ALASKA
PRINCE RUPERT
QUEEN
CHARLOTTE
ISLANDS
HECATE
STRAIT
QUEEN
CHARLOTTE
SOUND
PRINCE GEORGE
KAMLOOPS
VANCOUVER
NANAIMO
ISLAND
VANCOUVER
VICTORIA
PACIFIC
OCEAN

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Guide to Common Edible Plants of British Columbia

INTRODUCTION

In recent years there has been an increasing demand for a popular account of edible plants of British Columbia. This knowledge to-day is of interest to more and more people as the number of campers, hikers, and hunters is on the increase. There are also occasions when wild plants might play a vital role as emergency survival foods for those unfortunates who become stranded in the wilderness. We believe that in these days when the vast areas of our Province are being explored more and more, every person who for various reasons goes into this uninhabited wilderness ought to have at least a limited knowledge of edible plants and, even better, a handbook of this sort in his pocket, as one never knows when it might become useful.

There are so many plants within British Columbia that are valuable for food that it has been difficult to select those of maximum value. To a great extent, however, we have included in our selection those plants which seem to be most easily available, most easily recognized, and most difficult to confuse with poisonous plants. In making a selection we have chosen plants from as wide a geographic range as possible, in order to have a fair coverage of the entire Province. You will find species restricted to beaches as well as those restricted to alpine meadows or tundra of northern British Columbia.

For those who in one way or another become interested in this subject and wish to know about other food plants, attention is directed to a number of splendid works on this subject listed in the bibliography.

ARRANGEMENT

To simplify the use of this handbook, the plants are not grouped into families as in botanical classification, but are grouped accord-

ing to their general conditions of growth; i.e., as trees, shrubs, herbs, and so forth. In each of these groupings alphabetical order is followed.

For each species the scientific as well as the common or colloquial name is given. When several common names are used popularly for a species, these are listed in the synonomy. A brief description of the habit, stressing the edible parts rather than a complete botanical description, is given, and this is accompanied by an account of habitat and range in British Columbia. Food uses and other comments are given separately for each species.

Common names are placed in alphabetical order in the index, for easy reference to any particular species.

Identification

Taking under consideration the fact that this handbook will probably be used by laymen more than those who have a knowledge of botany, the scientific descriptions are limited, and emphasis is placed on the obvious characteristics of each plant, together with clear and precise line drawings. In addition, as a selection of plants was made, the authors endeavoured to avoid edible plants which might be easily confused in habit with similar poisonous or harmful species. With these aids we are confident that even an untrained person should find no difficulty in identification. However, a word of warning is issued; in case of any doubt it is better to avoid the plant concerned and to use those whose identity is unquestioned.

Acknowledgments

The authors can claim little originality, for full use has been made of literature available on the subject. We are indebted to all these sources for much of the data used. Many of the authors are referred to in discussion of the particular plants, and citations are made in the list of literature references.

The illustrations, drawn from the original plants, are the work of Frank L. Beebe, artist and illustrator at the Provincial Museum. They are original, skilful, very clear, and add considerably to the value of the book.

In the preparation of this book the authors have benefitted from the co-operation and help of Dr. G. C. Carl, whose support and interest has been greatly appreciated. Mrs. S. Newnham has given invaluable aid in the preparation of the manuscript, and Mrs. M. Szczawinski has helped greatly in checking the manuscript.

To all of these, the authors would like to express their appreciation and thanks.

A. F. S.

G. A. H.

Bracken Fern ***Pteridium aquilinum***

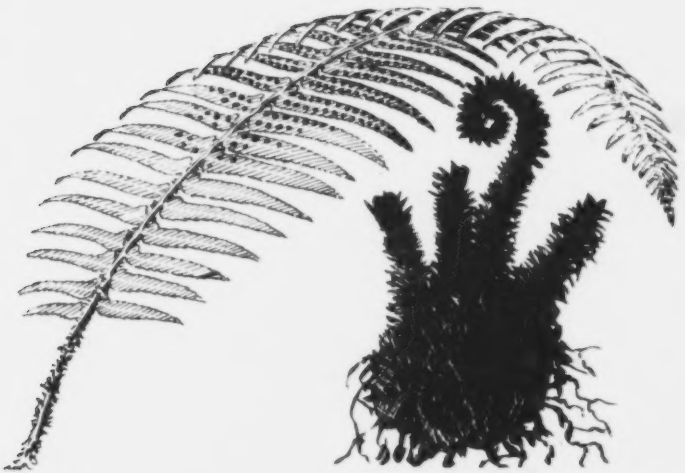
Other Common Names.—Brake fern, eagle fern, pasture-brake.

Description.—Coarse fern from long underground root-stock (rhizome). Frond distinctly 3-forked, broadly triangular in outline with numerous, oblong to linear divisions. The mature spores give a brown, velvety appearance on the under-surface.

Habitat and Occurrence.—Dry open woods, pastures, and clearings. Generally throughout the Province except at higher altitudes; reaches its best development in the Coastal forests.

Food Uses and Comments.—The rootstock may be roasted, peeled, and powdered; the inner starchy substance may then be eaten or ground and used as flour. The young unfolding stems may be used as a cooked vegetable; to many people they taste like asparagus. Pick the stems when they are about 4 to 10 inches high, remove the brown wool-like covering, wash, and boil in salted water.

The bracken is most widely known and is the commonest of our ferns, but very few people realize its use as a vegetable, especially early in the spring, when cultivated vegetables are scarce.



Sword Fern ***Polystichum munitum***

Other Common Name.—Western sword fern.

Description.—Fronds stiff, erect, forming a crown deriving from a stout, woody rootstock (rhizome), covered with reddish-brown scales, up to 5 feet in length. Frond divisions lance-shaped, with sharply toothed margins.

Habitat and Occurrence.—In clumps in damp, shady, coniferous woods and shaded slopes. Common throughout the Coastal region.

Food Uses and Comments.—The only part utilized as food is the stout rootstock, which should be roasted. It is said to be both tasty and nutritious.

Since it is widely spread and common in the Coastal region, the sword fern is a valuable source of food in an emergency.

Ostrich Fern ***Matteuccia struthiopteris***

Description.—Rootstock (rhizome) deeply subterranean, black, much branched. Sterile fronds in a circle and in vase-like arrangement, tall and plume-like in appearance, up to 6 feet tall. Young unrolled frond thick, succulent, and tender. Fertile (fruiting) fronds stiffly erect inside the circle of sterile fronds, resembling thick dark-brown feathers.

Habitat and Occurrence.—Woods rich in humus, alluvial soils, edges of swamps, and fertile wet slopes. Locally common from Hazelton to Giscome and south to Quesnel; between Lumby and Revelstoke; Liard River on the Alaska Highway; and lower Fraser Valley between Agassiz and Hope.

Food Uses and Comments.—The young unrolled fronds are used as a substitute for asparagus or string beans. Remove the dry, papery scales from the tightly coiled, leafy tips and bases of the

stock and wash carefully. Season with salt and boil or steam until tender. Serve as a vegetable or on toast.

In the more remote northern areas, where there is a shortage of fresh vegetables in winter, rootstocks can be brought into the cellar in autumn, covered with sand or earth, and forced for winter use. There are also possibilities of canning ostrich fern, a product known in many markets.

Ostrich fern is not generally distributed throughout our Province, but when it does occur it is very abundant, and should be utilized as a choice vegetable. In literature this species is often found under synonyms such as *Onoclea struthiopteris* and *Pteretis nodulosa*.

Other Ferns.—A few other ferns are tender enough to be used as emergency food, but some of these are bitter and unpalatable, and as there is usually an abundance of bracken, sword fern, and ostrich fern, there is seldom need to utilize the inferior species.

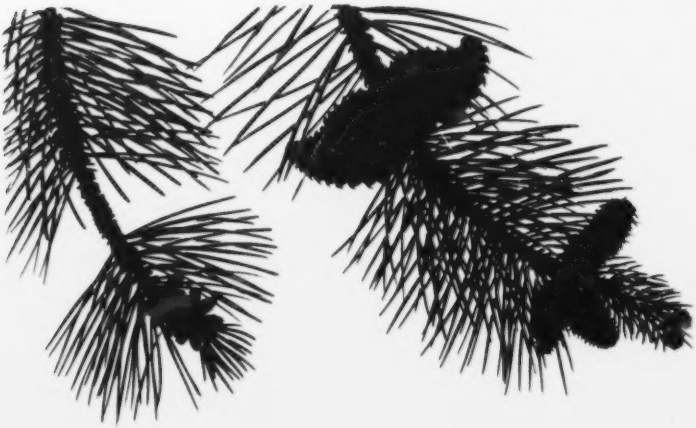
Caution.—No one who is not absolutely sure that he knows a true fern from other delicately cut-leaf plants should try to eat them. Some plants, such as poison hemlock, have leaves that, to the untrained eye, could easily be confused with fern fronds.

The Junipers ***Juniperus* species**

Description.—Junipers are evergreen shrubs or shrubby trees with compact branches, thin shreddy bark, and scale-like leaves. The leaves are pressed closely to the twigs, and may be sharp or blunt. The fruit is a fleshy, dark blue, bloom-covered, berry-like cone the size of a pea with a peculiar sweet resinous taste. These "berries" are borne in large numbers on shoots of the female tree and usually remain all winter.

Habitat and Occurrence.—Usually on exposed dry slopes and rocky ridges. Widely distributed in the Province, being most abundant in the southeast.

Food Uses and Comments.—The fruit is well known as an essential ingredient for flavouring gin and other cordials. Occasionally the berries are dried and ground and used in the preparation of a mush or cake.



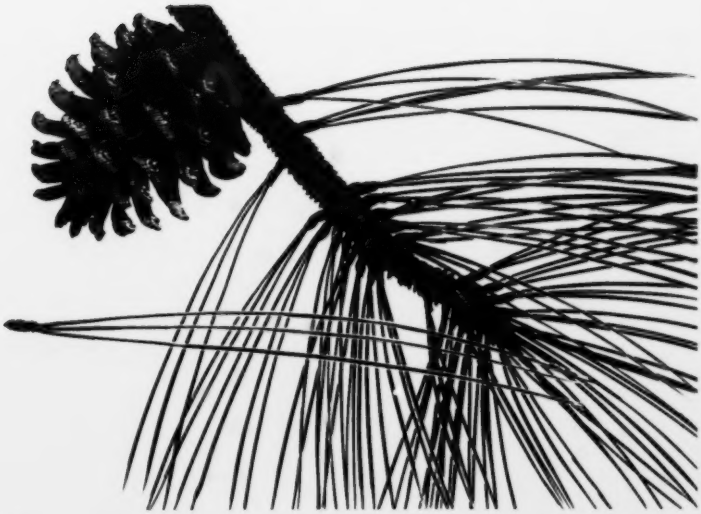
Lodgepole Pine ***Pinus contorta***

Other Common Names.—Jack pine, western jack pine, scrub pine.

Description.—Leaves needle-like in bundles of 2, 1 to 3 inches long, yellow or dark green. Cones rather small, egg-shaped, 1 to 2 inches long, often borne in clusters. The scales thickened and armed with slender prickles; often remain on the tree for a number of years.

Habitat and Occurrence.—Adapted to a wide range of sites and likely to be found almost any place in our Province.

Food Uses and Comments.—In the spring the juicy inner bark (cambium) can be eaten fresh or dried and used as an emergency food, or processed and stored for winter use. The nuts (seeds) are edible, but due to their small size are of no special consequence.



Western Yellow Pine ***Pinus ponderosa***

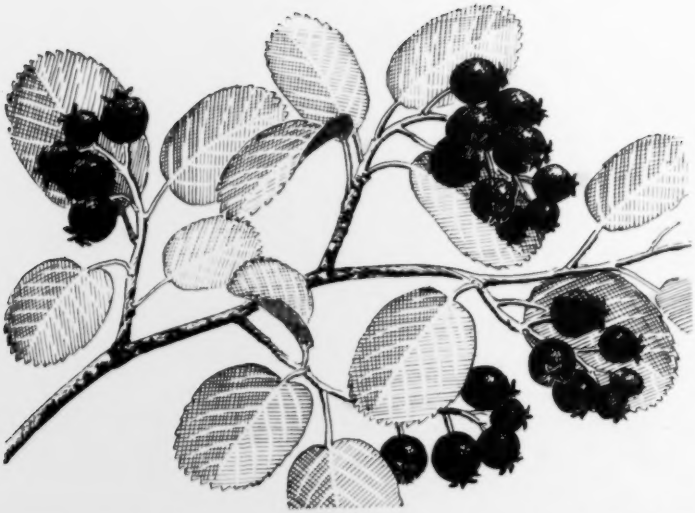
Other Common Names.—Ponderosa pine, yellow pine, British Columbia pine.

Description.—Leaves needle-like in bundles commonly of 3, rarely in 4 or 5; dark yellow-green, to 10 inches in length. Cones short stalked, reddish-brown with thickened scales and sharp prickles, up to 6 inches long.

Habitat and Occurrence.—In the dry belt zone of the Interior, occurring in open park-like stands. Confined to the drier portion of the southern Interior. It grows on dry, well-drained, exposed southerly slopes or plateaux up to elevations of 3,000 feet.

Food Uses and Comments.—The seeds are said to be pleasant to the taste and similar to those of lodgepole pine. They may also be crushed or ground and then made into a bread or biscuit with the addition of sunflower seeds.

This, the largest species of pine in our Province, ordinarily attains a height of about 80 feet and occasionally 160 feet or more.



June Berry ***Amelanchier* species**

Other Common Names.—Saskatoon berry, service berry.

Description.—A shrub or small shrubby tree, with oblong or roundish, coarsely toothed, alternate leaves and smooth greyish bark. Flowers in elongate drooping clusters, white and rather large. The berries are on slender stalks, round to pear-shaped, purplish or blue-black, with calyx lobes at the summit, very similar to the fruit of an apple in miniature.

Habitat and Occurrence.—Roadsides and moist banks and slopes throughout the Province.

Food Uses and Comments.—Because of the excellent quality of the fruit, june berry is valuable for making jellies, preserves, pies, and sauces. The berries may also be dried or canned for winter use. The dried fruit is used also as a substitute for currants. In the early days Indians used to mix the dried pounded fruit with corn-meal, meat, or other food to make cakes of pemmican.

Alpine and Red Bearberry
Arctostaphylos alpina* and *A. rubra

Description.—Low matted shrub with brownish shreddy bark. Leaves deciduous, obovate, finely serrated and very veiny; persist for many years as dry brown foliage. The flowers, which are small, appear in clusters early in spring before the leaves unfold. In *A. alpina* the berries are black and shiny, and in *A. rubra* they are red and juicy.

Habitat and Occurrence.—Alpine tundra, rocky soil on subalpine and alpine barrens. Alpine and red bearberry are essentially northern plants, occurring commonly in the northern Interior and northeastern portion of the Province.

Food Uses and Comments.—When properly ripe, fruits of both species are quite good and may be eaten raw; however, they are much better when cooked and served cold. To some people these berries seem to be rather unpleasant, on account of the acid or slightly bitter taste. The present authors found them quite palatable and refreshing.

Kinnikinik ***Arctostaphylos uva-ursi***

Other Common Name.—Bearberry.

Description.—An evergreen, trailing shrub, forming low dense mat-like growth. Leaves egg-shaped, thick and leathery. Flowers pink in nodding terminal clusters. Berries red or reddish, mealy, rather tasteless when raw.

Habitat and Occurrence.—Dry slopes, rocky areas, and sandy dry soils, throughout the Province.

Food Uses and Comments.—The mealy, dry berries are rather tasteless when raw, but quite palatable when cooked. The powdered dried leaves are used occasionally by natives as a substitute for tobacco or mixed with it. In some parts of Russia the dried leaves are also used as a tea called " Kutai " or Caucasian tea.

Oregon Grape ***Berberis aquifolia* and *B. nervosa***

Description. — Shrubs with evergreen, compound holly-like leaves and yellow flowers in an elongated terminal cluster and with blue berries.

Habitat and Occurrence.—Woods and dry hillside thickets in most parts of the Province.

Food Uses and Comments.—The berries may be eaten raw or used to make an excellent jelly.

Crowberry ***Empetrum nigrum***

Other Common Name.—Curlewberry.

Description.—Low, matted, and spreading evergreen shrub, with needle-like linear leaves resembling those of conifers. Flowers small, solitary, pink. Fruit black or purplish-black with large hard seeds.

Habitat and Occurrence.—Swamps, sphagnum peat bogs, rocky slopes in the mountains. Common throughout the Province.

Food Uses and Comments.—The berries may be eaten raw or stored. They are juicy, with a mildly medicinal flavour, improved by freezing. Being abundant and available all year round, they are considered as the most important fruit of the Arctic region.

Salal ***Gaultheria shallon***

Description.—Erect or partly prostrate wiry shrub, with evergreen, leathery, ovate leaves. Flowers in clusters, whitish-pink. Fruit black, hairy, and berry-like in appearance.

Habitat and Occurrence.—Mostly coniferous forest thickets, rocky cliffs, ravines, and exposed shores. Restricted to the Coast and very abundant in many areas.

Food Uses and Comments.—Salal is the Coast Indian word for this shrub, the berries of which played an important role in their daily diet, being utilized in various ways. For example, the berries were made into a syrup or dried in cakes. Salal is so abundant on the Coast and grows to such an extent that nearly all are familiar with it.

In the opinion of the authors, the fruit is not only edible, but also pleasant in taste when ripe, and since it is so plentiful on the Coast, it should be placed high on the list of possible sources of food for those lost in the bush.

Labrador Tea ***Ledum groenlandicum***

Description.—Low, evergreen, aromatic shrub with alternate, oblong leaves, rolled in and covered beneath by dense rust-coloured hairs. Leaves fragrant when crushed. Flowers white or creamy in terminal umbrella-shaped clusters.

Habitat and Occurrence.—Muskegs, swamps, bogs, and moist woods; wet, acid mountain meadows. Common throughout the Province.

Food Uses and Comments.—The leaves may be used as a tea substitute. The pungent aromatic taste is somewhat reduced if the leaves are steeped in one or two changes of boiling water. The addition of a few drops of lemon juice also improves the flavour. It is said to have narcotic properties, so that care should be used by the unaccustomed. In the reputedly poisonous *Ledum glandulosum*, the undersides of the leaves are pale and resinous-dotted and the margins are not rolled in. It occurs in mountainous districts east of the Cascades.

Bog Cranberry ***Oxycoccus* species**

Description.—A slender trailing, woody shrub with very thin, almost filamentous, flexible branches. Leaves small, ovate, evergreen, leathery, without teeth, curled at the margin. Flowers deep pink, very often solitary or in clusters, not more than 3, axillary or terminal. Fruit a globose, reddish, many-seeded juicy berry.

Habitat and Distribution.—Sphagnum bogs, wet muskeggy places. Widely scattered throughout the Province.

Food Uses and Comments.—The use of bog cranberries as a cooked fruit, jelly, acid drink, or pie filling is well known, but according to Fernald and Kinsey (1943) "the berries may be utilized in various ways not so generally known: in the making of jelly or refreshing drinks; the syrup whipped with gelatine or white of egg into a light dessert; or in the making of the well known camouflage, mock cherry-pie. Cranberries ordinarily require a large amount of sugar, but some years ago a Philadelphia experimenter announced that, by adding salt to the cooking berries before

the sugar is added, the acidity is counteracted and only a small amount of sugar is needed. In our own experience, a teaspoonful of salt is found to take the place of half the sugar (a cupful) ordinarily used with a quart of cranberries."

The genus *Oxycoccus* is often classified with *Vaccinium*, although a number of botanists recognize it as a separate genus.

Choke Cherry ***Prunus virginiana***

Other Common Name.—Western choke cherry.

Description.—Shrubs or shrubby trees with purplish-grey bark and finely serrate, oval-shaped leaves. Flowers numerous, white, in long clusters. Fruit like a small cherry, red to black.

Habitat and Occurrence.—In scattered occurrence, on banks of streams and moist hillsides throughout the Province. Most abundant west of the Cascades.

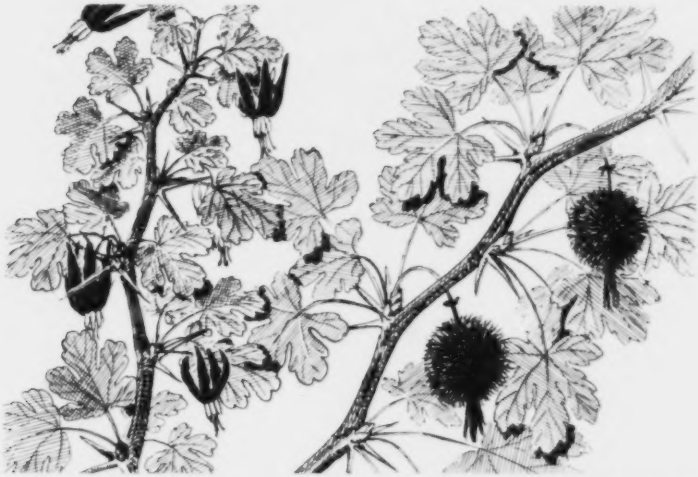
Food Uses and Comments.—The berries are bitter and astringent unless completely ripe. They are best used as a jelly combined with apples or other fruit.

Gooseberry and Currant — *Ribes* species

Native species of gooseberry and currants are quite often found in our Province. None of them are poisonous, and some produce a very palatable fruit. Almost everyone knows them, as in habit they closely resemble the cultivated varieties, and can be easily identified by the maple-shaped foliage. The fruit is a familiar berry with quite a characteristic flavour. The fruit of the wild species of currant is generally small and often sour, but it may be eaten raw or used for preserves. That of the wild species of gooseberry varies greatly in size and quality, with some species having a pleasant sweet tasting fruit.

To represent this numerous genus, one species of gooseberry, *Ribes lobii*, and one species of currant, *Ribes lacustre*, are illustrated and discussed.

Ribes lobii is the gooseberry with the largest fruit, but is found only in a very limited area on Vancouver Island. Its fruit resembles a cultivated variety of gooseberry and is delicious when ripe.



Ribes lobii

Ribes lacustre is the most common wild species of currant in our Province. It has a small fruit with rather an insipid flavour, but being common throughout the Province it should be recognized as an edible food in an emergency.

Ribes lacustre

Wild Rose ***Rosa nutkana* and other species**

Description.—Erect shrub usually with thorny stems, and with normally 7 broadly ovate, toothed leaflets. Flowers usually solitary, pink and showy. Fruit (hips) orangy-red, very conspicuous.

Habitat and Occurrence. — Open woods, ditches, seashore; throughout the Province.

Food Uses and Comments. — The fruit or hips when ripe make excellent jelly or marmalade. One method for making marmalade is as follows: To 1 pound of hips add ½ pint of water, boil till tender, pass pulp through seive, mix in 1 pound of sugar to 1 pound of pulp, and boil again until it jells. Any preserve from rose hips is unusually rich in Vitamin C. For this reason, medical authorities emphasize their value as they are richer in Vitamin C than oranges.

Blackberries ***Rubus* species**

There are a number of shrubs commonly called blackberries as they produce a black fruit well known to everyone. As the blackberries are so closely related and in habit are so similar, there is no point in discussing each one individually. Blackberries and raspberries belong to the Rose Family (*Rosaceæ*), and it is the fruit-growers who separate them according to the colour of the fruit.

A number of blackberries occur throughout our Province, each one varying to a certain degree from the other. All have trailing stems, armed with sharp thorns, alternate leaves, deciduous or persistent, white or pinkish showy flowers, and dark-purple to black juicy fruit which is an aggregation of weakly connected drupelets.

The species illustrated is *Rubus ursinus*, our native blackberry, which has a fruit of excellent flavour and is the source of several horticultural varieties, such as loganberry, boysenberry, and many other strains.

Blackberries are often considered as weeds in woodland and gardens and are extremely difficult to eradicate.

The fruit can be eaten raw, made into preserves, pies, jams, jellies, or pressed into cakes and dried, or made into a drink, or used as a flavour for ice-cream. The leaves, when dried, make a desirable tea. The young shoots may be peeled and eaten as a nibble.

Raspberries ***Rubus* species**

Raspberries, like the blackberries, also belong to the family *Rosaceæ, Rubus* genus. The essential difference separating them lies in the colour of the fruit, which, in the case of the raspberry, is, other than black, most commonly red. Fruit, the main source of food in all our species, is edible. A number of species grow in our Province, but only a few of the most common ones are discussed in detail in this handbook.

Thimbleberry ***Rubus parviflorus***

Description.—Erect, unarmed shrub, up to 8 feet tall. Leaves large, deeply cut, resembling maple. Flowers large, white, in terminal clusters. Fruit red, hemispherical in shape.

Habitat and Occurrence.—Open, wooded, moist and dry places up to subalpine level, particularly abundant from the Coast to the Rockies. Occasionally very profuse, forming thickets.

Food Uses and Comments.—Similar to those of the blackberries.

Salmonberry ***Rubus spectabilis***

Description.—Erect, thicket-forming shrub. Stems armed with weak prickles below and unarmed above, with brown bark. Leaves not hairy, usually 3-foliate. Flowers solitary, pinkish to red and showy. Fruit easily separated from receptacle, raspberry-like, yellow-orange to reddish.

Habitat and Occurrence. — Moist woods, swamps, lowlands, stream-banks and mountain-slopes. Particularly abundant in the area west of the Coastal mountains.

Food Uses.—Similar to those of the blackberries.

Cloudberry ***Rubus chamæmorus***

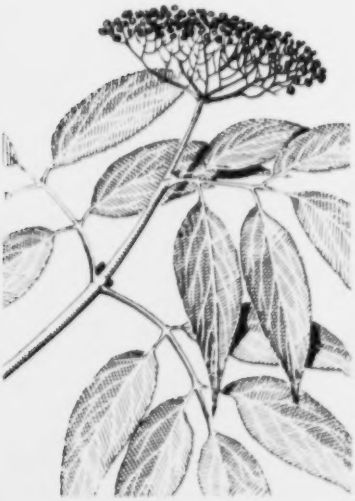
Other Common Name. — Baked-apple berry.

Description. — Low herbaceous plant with creeping rootstock and upright branches up to 10 inches tall. Leaves lobed, round and heart-shaped. Flowers solitary, terminal, white and showy. Fruit very juicy, at first orange and turning yellow at maturity.

Habitat and Occurrence. — Peat bogs, acid swamps, wet mountain-slopes; particularly abundant in the northern part of the Province.

Food Uses and Comments.—By many, considered to be the most delicious of all northern berries. They may be eaten raw or with sugar, cream, and other dressings. According to Porsild (1953), "The Eskimo, lacking such refinements, serve them in a mixture of seal oil and chewed caribou tallow which has been beaten to a consistency of whipped cream. This culinary treat in Alaska is known as 'Eskimo Ice Cream.'"

Elderberry ***Sambucus cerulea***



Other Common Name.— Blue-berried elder.

Description.—Coarse shrub with several stems from the base, up to 15 feet tall, with brittle, pithy twigs. Leaves divided into 5–9 leaflets; leaflets lanceolate to elliptic. Flowers small, white, numerous, in flat-topped umbel. Fruit globose, bluish-black with a waxy bloom.

Habitat and Occurrence.— Valley and stream borders in open situations. Restricted to Vancouver Island and southern British Columbia.

Food Uses and Comments.— The berries may be boiled; raw berries steeped in water make a refreshing drink. They are also used for pies and jellies.

This species is known under the synonym of *S. glauca.*

The other species, red-berried elder, commonly occurring throughout the Province, has an unpleasant taste, although considered to be harmless.

Buffalo Berry ***Shepherdia canadensis***

Other Common Names.—Soapberry, Canadian buffalo berry, soopolallie.

Description.—A thornless, rather small shrub, up to 6 feet tall, with the young twigs brown. Leaves elliptical, scurfy, green above and covered with rusty scales beneath. Flowers in the axils of the leaves, small, yellow, appearing with the leaves. Fruit scarlet or orange-yellow.

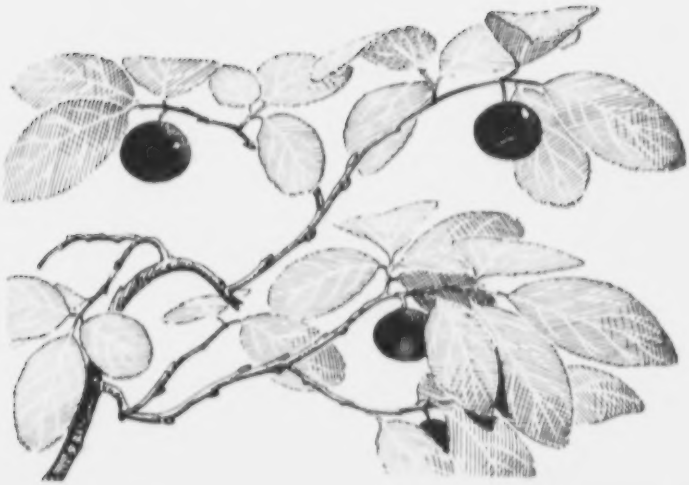
Habitat and Occurrence.—Dry edges of forests, dry open woods, rocks and slopes. Throughout the Province, locally very abundant.

Food Uses and Comments.—The berries, when beaten up with an egg-beater and mixed with a little sugar, froth up into a salmon-coloured mass, both tasty and nutritious. Because of the froth-forming character of the berry, the name soapberry is often applied to this species. The buffalo berry is said to be disagreeable to the taste of the white man; however, when properly prepared and sweetened, it is considered a great delicacy by the Indians.

Blueberry, Huckleberry, Bilberry, Wortleberry, and Cranberry ***Vaccinium* species**

Some of the best-known edible berries growing in our Province belong to the group which we indiscriminately call blueberry, huckleberry, bilberry, wortleberry, or cranberry. Whatever local or common names they are given or whatever colour of berries they produce, all belong to the same genus, *Vaccinium*, and are members of the Heather or Heath Family (*Ericaceæ*). In our flora this genus is represented by some fourteen species. They are chiefly erect shrubs or sub-shrubs, and produce fruit which is so familiar to many of us. Without exception, all of them are edible and some even choice.

Only a few of the most interesting are discussed in this booklet.



Mountain Bilberry ***Vaccinium membranaceum***

Other Common Names.—Twin-leaved huckleberry, blue huckleberry, mountain huckleberry.

Description.—A densely branched, erect, coarse shrub, up to 6 feet tall, with greyish shredding bark on old branches. Leaves, ovate to oblong, pointed, sharply toothed, and paler on the lower surface. Flowers creamy-pink, single, in the axils of leaves. Fruit a purplish-black berry without a bloom.

Habitat and Occurrence.—Mountain-slopes, open coniferous forest throughout the Province; most abundant in the southeast Interior.

Food Uses and Comments.—The fruit can be eaten raw or used in many ways for preserving. It has a good flavour and is quite large in size. A very refreshing cold beverage can be made from the diluted, sweetened juice, and the dried berries are excellent for making hot drinks.

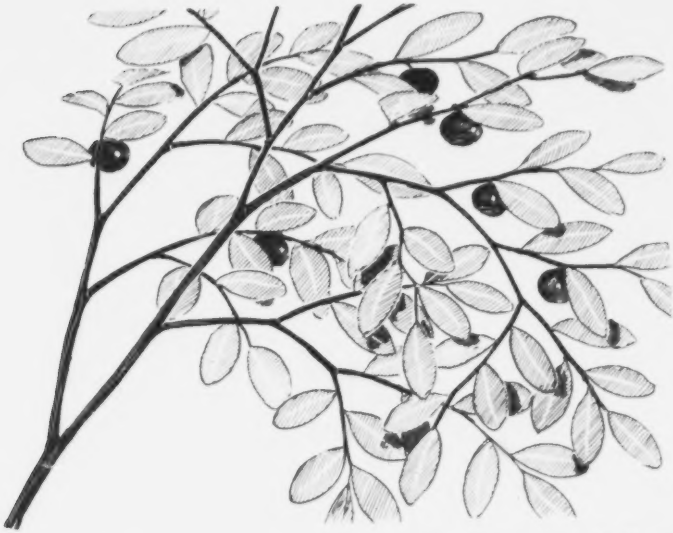
Evergreen Huckleberry ***Vaccinium ovatum***

Other Common Name.—Shot huckleberry.

Description.—Erect, evergreen shrub up to 8 feet tall. Leaves very numerous, narrowly ovate, leathery, dark green and lustrous above, and paler green beneath. Flowers pink, small, up to 10 in a cluster. Fruit a shiny black or reddish-brown berry.

Habitat and Occurrence.—Soils rich in humus in coniferous forests, particularly on the west coast of Vancouver Island.

Food Uses and Comments.—The fruit was gathered and used by Indians for food, but it is a bit too acid and too small for commercial use. As this fruit occurs in such profusion, many people along the Coast eat it fresh or preserve it for the winter.



Red Huckleberry ***Vaccinium parvifolium***

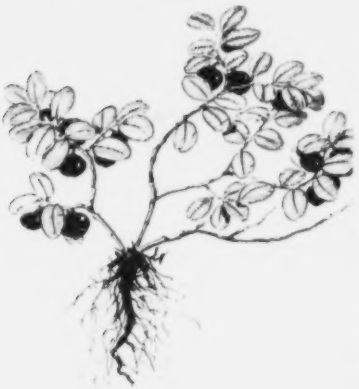
Other Common Name.—Red bilberry.

Description.—Erect shrub with green stems prominently angled, up to 12 feet tall. Mature leaves deciduous, thin, oval to oblong-eliptic, not toothed; juvenile leaves persistent, leathery, finely toothed. Flowers pink, in the axils of the leaves. Fruit a globose, bright-red berry.

Habitat and Occurrence.—Open coniferous woods in the Coastal area.

Food Uses and Comments.—The berries are a well-known article of food, very delicious and refreshing whichever way they are prepared. They may be eaten raw, or in pies, jellies, etc., and have commercial possibilities.

Mountain Cranberry ***Vaccinium vitis-idea***

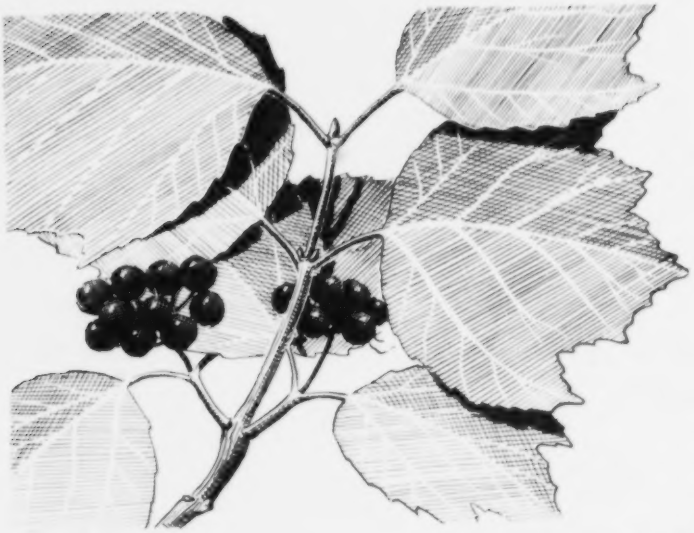


Other Common Names.— Rock cranberry, cow-berry, lingenberry, lengon.

Description. — Low, evergreen, mat-forming, sub-shrub with tufted branches up to 6 inches tall. Leaves elliptic, leathery, with scattered black glands beneath, resembling those of boxwood. Flowers white or pink, small, nodding in terminal clusters. Fruit bright-red berries, remaining on the vines until the following spring.

Habitat and Occurrence.—Dry bogs, rocky barrens, open coniferous woods. Widely scattered along the Coast; common in the northern Interior.

Food Uses and Comments.—This is a most important fruit in the north country. The dark-red, rather acid or tart berries are edible but improve upon cooking. They are widely used, especially in Europe, as a preserve. The taste may be improved by adding sugar to make jellies or sauces as a substitute for cranberries. They are also used to some extent in eastern Canada. In the Scandinavian countries, the berries are gathered in large quantities, placed in barrels filled with water, and shipped to the world markets, where they are put to use as a substitute for cranberries. By many it is considered to be of better flavour than the true cranberry.



Squashberry ***Viburnum edule***

Other Common Name.—High-bush cranberry.

Description.—Straggling or erect shrub, up to 8 feet tall. Leaves 3-lobed and sharply toothed. Flowers white in flat-topped umbrella-like inflorescence. Fruit red or orange, with large flattened stone.

Habitat and Occurrence.—Valleys, open woods, and streambanks along the Coast northward.

Food Uses and Comments.—The fruit can be eaten raw when thoroughly ripe, and makes an excellent jelly. When cooked as a sauce, it is equal to the bog cranberry.

Couch-grass ***Agropyron repens***

Other Common Names.—Quack-grass, dog-grass, quick-grass, witch-grass.

Description.—Perennial, creeping grass, up to 4 feet tall, with slender, wiry, yellow scaly rhizome, tenaciously rooting at the joint. Stalk erect with spike made up of smaller spikelets and set in alternate notches of the axis. Blades relatively thin, flat, up to ½ inch wide.

Habitat and Occurrence.—Waste places, meadows, pastures, ditches, and cultivated fields throughout the Province.

Food Uses and Comments.—This grass, a troublesome and weedy plant, introduced from Europe is spreading rapidly. Not many people realize that it can be utilized and eaten in an emergency. The roots (rhizomes) can be dried, ground, and used as a flour for bread or as a thickening agent for sauces.

The present authors decided to include this species as, although the plant is a most difficult weed to eradicate, it can also be put to useful purpose and is well known to the majority of us.

Wild Onion ***Allium* species**

Description.—Perennial plant from coated bulbs having a characteristic onion odour. Leaves tubular, narrow, and generally shorter than the flower stem. Flowers rose coloured to white, in a terminal umbel, often appearing after the grass-like leaves have died down.

Habitat and Occurrence.—Dry rocky or sandy benches and slopes in open woods or brush land. In all parts of the Province.

Food Uses and Comments.—The bulbs may be either pickled or parboiled to get rid of the very strong taste. Excellent for flavouring soups and stews.

Milkweed ***Asclepias speciosa***

Other Common Name.—Silkweed.

Description.—Perennial plant with a sturdy stem and opposite, oblong leaves. Flowers purplish, numerous, arranged in globular umbels, each with characteristic tubular hood, followed by the large green seed-pod, splitting on one side to release silky seeds. All parts of the plant contain a milky juice.

(NOTE.—Identification of the plant should not be made on the basis of its milky juice alone as there are some other plants which also produce a similar substance but which are inedible. The milky juice, combined with other characters, should make identification fairly easy.)

Habitat and Occurrence.—Dry open places, roadsides, borders of fields, throughout the driest parts of the Province east of the Coast Mountains.

Food Uses and Comments.—Cook the tender shoots in at least two waters to remove the bitter principles (not poisonous) and serve with butter and seasoning. The shoots are not the only part that can be utilized for food; the blossoms also serve as a sweetening agent, for the flowers are rich in nectar and are the source of a good brown sugar. Young pods are edible when well cooked, especially in stews. In eastern Canada and the United States the Indians cooked and ate the tubers of this plant as well.

Orach ***Atriplex patula***

Description. — An annual plant with erect to procumbent branches, up to 3 feet tall. Leaves lanceolate, not toothed, bright green and not hairy, but with a fine white mealy bloom beneath. Flowers small, green, in dense or interrupted spikes. Fruit spiny, larger than the flowers.

Habitat and Occurrence.—Mainly on salt marshes and wet flats along the Coast; occasionally on moist alkaline flats in the Interior.

Food Uses and Comments.—The leaves and tips of young plants make an excellent green vegetable, equal to, if not better than, lamb's quarter or pigweed, to which they bear some resemblance.

Balsam Root ***Balsamorrhiza deltoidea* and *B. sagittata***

Other Common Name.—Sunflower.

Description.—Perennial, low plant with deep, thick taproot. Leaves large, basal, mostly triangular or heart-shaped, up to 8 inches long. Flowers, yellow, resembling sunflower, with solitary heads.

Habitat and Occurrence.—Open dry hills and flats; dry slopes. South Vancouver Island and the dry southern Interior, particularly in the Okanagan Valley and East Kootenay.

Food Uses and Comments.—The ripe seed, when pounded into a meal, is stated to be quite palatable. The whole seed may also be eaten in its natural state without any preparation. The fleshy roots, when roasted, are said to be sweet and pleasant to the taste.

Both species are very similar in appearance.

Mariposa lily (*Calochortus apiculatus* and *Calochortus macrocarpus*).

Mariposa Lily ***Calochortus* species**

Other Common Names.—Sego lily, star tulip.

Description.—Perennial plant from underground corm (bulb) about the size of a small walnut. The stem has narrow grass-like leaves and 1 to a few flowers. Flowers, showy with 3 broad petals and 3 narrow sepals. Two species are found in British Columbia. *C. apiculatus* with cream flowers and *C. macrocarpus* with purple flowers.

Habitat and Occurrence.—*C. apiculatus:* Open coniferous forests, grassy slopes or grassland; Kootenay area from Creston eastward to the Crowsnest Pass. *C. macrocarpus:* Sage-brush plains, dry Interior forests; particularly abundant in the Okanagan Valley, Lytton, Merritt, and Ashcroft areas.

Food Uses and Comments.—The corms are palatable and nutritious when boiled, roasted, or steamed in pits. According to Medsger (1939), "It is claimed that the Mormons in their first years in Utah consumed the bulbs in great quantities. This may have influenced the people in making the Mariposa Lily the state flower of Utah. It is a beautiful wild flower belonging to the Lily Family and its use for food should be as a last resort."

Camas ***Camassia quamash* and *C. leichtlinnii***

Other Common Names.—Camass, wild hyacinth.

Description.—Perennial plant, up to 2 feet tall, from rather large coated bulb. Leaves grass-like, long and narrow, whitened above. Flowers blue, large and showy, in loose terminal cluster, resembling the garden hyacinth.

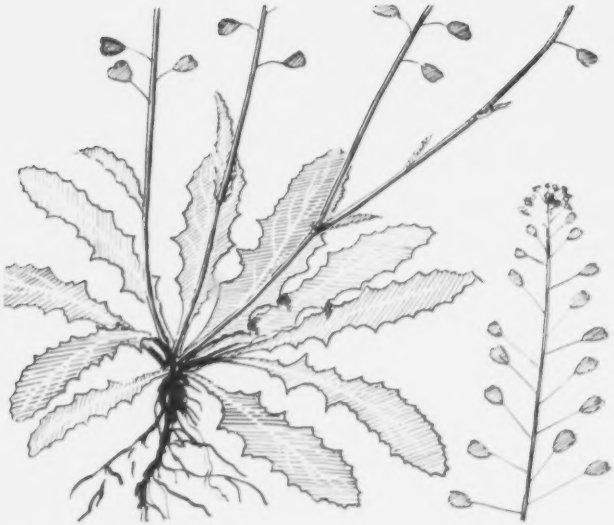
Habitat and Occurrence.—Meadows and grassy flats. Mainly on Vancouver Island and the Gulf Islands. Occasionally in isolated localities in the southern part of the Province.

Food Uses and Comments.—The underground bulb, when roasted, makes a delicious repast. In earlier days the bulbs formed a great part of the vegetable food of the Indians of Vancouver Island and the adjacent mainland. When well-cooked, they are of excellent flavour and highly nutritious. Bulbs are generally prepared by boiling or roasting, but the Indians prefer to cook them differently. They dig a hole and line the bottom and sides

with flat stones, then build a fire over it. When the stones get thoroughly heated, they rake out the embers, put in a lining of green leaves, and place the camas bulbs upon them. These are covered with more green leaves, and the whole heaped over with earth and left to steam for a day and a night. The earth and leaves are then scraped off, and the bulbs carefully removed. This method is also used by the Indians in cooking both vegetables and meats.

According to C. F. Saunders (1920), "White settlers, in the days before their orchards and gardens were established, found in camas a welcome addition to their meagre and monotonous bill of fare, and camas pie was a not uncommon dish in many an old time Oregon and California household."

Medsger (1930) says, "We also find it recorded that the bulbs, when boiled in water until this is evaporated, form a very good molasses used by the Indians on festive occasions, which is highly prized by them."



Shepherd's Purse ***Capsella bursa-pastoris***

Description.—Annual plant. Leaves in a basal rosette. Flowers small, white in terminal cluster on upper part of the stem. Fruit-pods triangular or heart-shaped, flat.

Habitat and Occurrence.—A common weed in gardens and fields all over the Province.

Food Uses and Comments.—The young leaves, blanched and used as a salad, are said to taste like cabbage, but are more delicate in flavour; they also make a good substitute for spinach.

Lamb's Quarters ***Chenopodium album***

Other Common Name.—Pigweed.

Description.—Annual plant, the young growth whitened with a close mealiness. Leaves alternate, long-stalked, more or less angulate-toothed, especially near the base, somewhat fleshy, 1 to 4 inches long. Older plants bear many insignificant scalloped green flowers in a spike-like cluster. Seeds black.

Habitat and Occurrence.—A common weed throughout the Province.

Food Uses and Comments.—The young leaves and tops make a salad or may be cooked as greens. The dried or slightly cooked seeds may be ground into a flour. This plant can be used as a superior green vegetable, and it is a pity that it is not used more generally. Some people claim that it is better in taste than spinach.

Related species can be similarly utilized.

Strawberry Blite ***Chenopodium capitatum***

Other Common Name.—Strawberry spinach.

Description.—Very similar to pigweed, but with fleshy, bright red fruit.

Habitat and Occurrence.—Moist ground, burned damp clearings, and borders of sandy areas, mainly in the northern part of the Province (boreal zone).

Food Uses and Comments.—One of the most striking plants when in the fruiting stage, due to the masses of brilliant red pulpy fruits. The foliage of the plant can be used as a pot herb, like spinach, and the fruits may be eaten either raw or cooked. According to some authorities, the fruit is highly nutritious.

Chicory ***Cichorium intybus***

Other Common Name.—Blue sailors.

Description.—Tall perennial plant with loosely branching rigid stem and a long deep taproot. Leaves as in dandelion, becoming reduced upwards. Flowers bright blue.

Habitat and Occurrence.—Roadsides, fields, and waste places throughout the Province.

Food Uses and Comments.—The basal leaves, blanched in early spring, make a tasty salad. If picked green they should be boiled in several changes of water to remove bitterness, then prepared in the same manner as for spinach. The roots, dried and ground, make an excellent coffee substitute.

The forcing of chicory roots for blanched heads is the basis of a very large industry in Belgium.

Edible Thistle ***Cirsium* species**

Description.—A tall biennial plant. Leaves prickly. Flower-head mauve to purple.

Habitat and Occurrence.—Throughout the Province in many areas. Very abundant, and some species are considered as noxious weeds.

Food Uses and Comments.—The roots are considered a useful source of food. When roasted they become very sweet and sugary. Boiled as a vegetable, they are tender but not especially appetizing.

A number of species of both *Cirsium* and *Carduus* occur in the Province. All of them are commonly known as thistle, and none have poisonous properties.

Miner's Lettuce ***Montia perfoliata***

Other Common Name.—Indian lettuce.

Description.—Succulent, annual plant with stems up to 1 foot tall. Basal leaves ovate, long-petioled, the upper leaves often united in pairs. Flowers small, white, and nodding, in loose cluster.

Habitat and Occurrence.—Damp woods and shady streamsides, abandoned cultivated wet fields. Chiefly in Coastal belt or damp Interior sections of the Province.

Food Uses and Comments.—The leaves can be eaten raw and make an excellent green, which tastes like spinach when cooked.

Fireweed ***Epilobium angustifolium***

Other Common Names.—Great willow herb.

Description.—Perennial plant, up to 6 feet tall. Leaves lanceolate, resembling those of willow. Flowers showy, pink to purple in terminal, spike-like cluster.

Habitat and Occurrence.—Logged forests, burned-over areas, moist banks, roadsides throughout the Province.

Food Uses and Comments.—The young leaves can be used as greens. The stalk, when split open, exposes a sweet glutinous substance, which is said to be quite palatable. The dried leaves may be used to make a beverage.

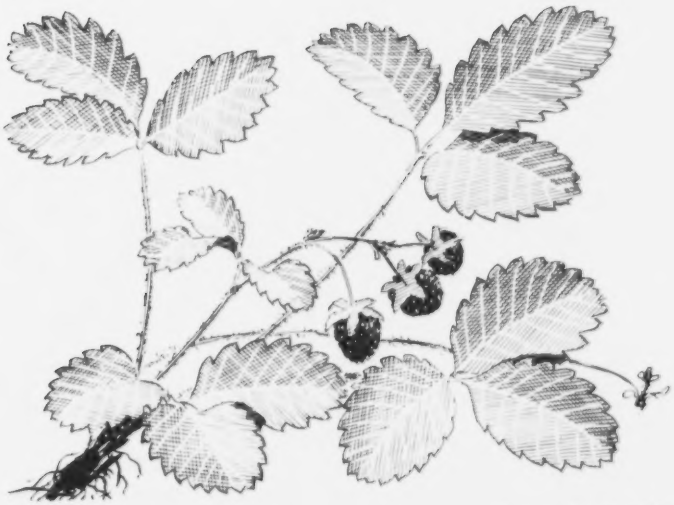
Riverbeauty ***Epilobium latifolium***

Other Common Name.—Broad-leaved willow herb.

Description.—Perennial plant, up to 2 feet high. Leaves lanceolate, rather fleshy, whitened on both surfaces, broader than in the previous species. Flowers showy pink to purple, in terminal leafy clusters.

Habitat and Occurrence.—River-banks, wet places, subalpine to alpine slopes, often on talus. Most abundant in the northern part of the Province, taking over extensive areas, especially on gravelly flats.

Food Uses and Comments.—Suitable as a pot herb. The new shoots and young fleshy leaves are much superior to those of fireweed. Being one of the most common plants in the northern part of the Province and easy to identify, it is especially recommended as an emergency food.



Wild Strawberry ***Fragaria* species**

Description. — Perennial plant, often with runners. Leaves composed of 3 leaflets. Flowers white, with receptacle becoming fleshy. Fruit similar to cultivated strawberry.

Habitat and Occurrence.—Shaded banks, open woods, clearings, throughout the Province.

Food Uses and Comments.—The berries are well known for their deliciousness. A refreshing drink can be made of these berries by first bruising and then adding them to water. Strawberry tea: To 1 quart of boiling water add two large handfuls of young leaves.

Chocolate Lily ***Fritillaria* species**

Other Common Names.—Rice root, fritillaria, mission bells.

Description.—Perennial plant with a simple stem from a large scaly bulb, surrounded by bulblets resembling grains of rice. Leaves whorled or scattered, broad or linear-lanceolate. Flowers few or solitary, nodding; in *F. kamtschatcensis*, deep purple; in *F. lanceolata*, mottled with greenish-yellow; and in *F. pudica*, yellow.

Habitat and Occurrence.—*F. kamtschatcensis* and *F. lanceolata*, open bluffs, grassy open woods, chiefly in the Coastal zone. *F. pudica*, grassy slopes and dry open forests of the Interior.

Food Uses and Comments.—The bulbs cooked or steamed are a source of a nutritious food.

Wild Licorice ***Glycorrhiza lepidota***

Description.—Perennial plant from extensive, aromatic, and sweetish rootstock. Leaves divided into a number of leaflets. Flowers pea-like, yellowish-white, in dense clusters.

Habitat and Occurrence.—Waste places and low ground, southern British Columbia.

Food Uses and Comments.—The long fleshy roots are sweet and were much used by the Indians, either raw or roasted in ashes.

The licorice of commerce is obtained from *G. glabra*, which is grown chiefly in southern Europe.

Cow Parsnip ***Heracleum lanatum***

Description.—Perennial plant with stout stem up to 10 feet tall. Leaves large, deeply lobed, with conspicuously inflated and clasping base. Flowers small, white, in large flat-topped umbrella-like structures.

Habitat and Occurrence.—Seashores throughout the length of the Coast-line.

Food Uses and Comments.—The flower stems, before the flowers open, may be peeled and the inner portion eaten green, or they may be cut up into pieces like celery and boiled until tender.

According to Fernald and Kinsey (1943), "Although the cow-parsnip is a picturesque but coarse and ill-smelling plant not generally recognized among the whites as a food-plant, its young leaf-stalks and young stems, before the expanding of the flowers, when properly prepared, are quite as wholesome and almost as palatable as stewed celery. The tender stalks are as coarse as large stalks of

celery, of an aromatic and sweetish flavor, though when green with a strong and disagreeable taste. Among the northern Indians, who eat the peeled stalks either raw or cooked, they have always been in high repute. In our own experience, the raw stalks, on account of the disagreeable odor and taste, are not attractive, but when boiled in two waters (the first water thrown off) they are an agreeable or even delicious vegetable."

(NOTE.—Caution should be taken as some relatives of cow parsnip, such as water hemlock and poison hemlock, are poisonous. Incorrect identification can be made, especially in the spring before the plant is fully developed.)

Bitter Root ***Lewisia rediviva***

Other Common Name.—Sand rose.

Description. — Low perennial plant with a fleshy taproot. Leaves linear-oblong, clustered at the base, soon withering. Stem naked, short, with solitary rose-coloured or white flower.

Habitat and Occurrence.—Dry plains of southern Interior.

Food Uses and Comments.—The roots, with the outer skin removed, may be cooked by boiling. At one time these took a prominent place in the food of the Indians.

According to Medsger (1939), "The root of this plant is intensely bitter when raw, but this property is chiefly removed when cooked. It is white, starchy, and without doubt nutritious. The Indians are said to gather it in the springtime when the outer covering or bark, which contains most of the bitterness, slips off easily. This was an important food plant among the western Indians, possibly often from necessity rather than choice."

Yellow Arum ***Lysichiton americanum***

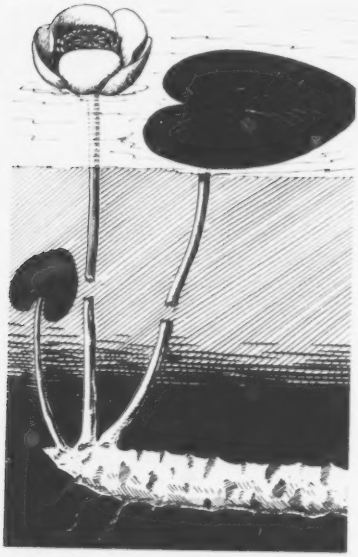
Other Common Name.—Skunk cabbage.

Description.—Perennial plant from fleshy rootstock. Leaves large, oblong, succulent, with deeply impressed veins. Flowers embedded in a fleshy spike partially enclosed in a yellow sheath or spathe.

Habitat and Occurrence.—Rich soil in shady swamps along the Coast; east to the Columbia.

Food Uses and Comments.—The roots dried and ground into a flour will make an emergency ration. The taste is somewhat peppery, a characteristic which can be partially mitigated by keeping the flour a week or two before using. The Indians roasted the whole roots in pits, the heat and moisture dissipating the objectionable qualities to a considerable extent. The young leaves, just as they appear above the ground in the early spring, make an agreeable pot herb or " greens." No unpleasant taste or odour is noticeable if they are subjected to several changes of water during the process of cooking.

Yellow Pond Lily ***Nuphar polysepalum***



Description. — Perennial plant from thick, coarse, creeping rootstock. Leaves large, oval to almost circular or heart-shaped; floating. Flowers single, yellow, sometimes tinged toward base with red; very showy.

Habitat and Occurrence.— Ponds and lakes throughout the Province.

Food Uses and Comments.— The ripe seeds, extracted from the pods, may be roasted or ground into flour or meal; popped like corn, they are very nutritive and palatable. The rootstocks are said to be used as a starchy vegetable.

Cactus ***Opuntia polyacantha* and *O. fragilis***

Other Common Name.—Prickly-pear.

Description.—Perennial prostrate plant, forming low spreading clumps. Stem joints egg-shaped, armed with needle-like spines. Flowers yellow, showy, short lasting.

Habitat and Occurrence.—Common in the dry Interior of the Province, on Vancouver Island in isolated rocky localities on the coast, and on some of the Gulf Islands.

Food Uses and Comments.—The young fleshy joints may be roasted, boiled, or fried, after first removing the spines by burning or by slicing off spines and outer coat in one operation.

Mountain Sorrel ***Oxyria digyna***

Other Common Names.— Alpine sorrel, scurvy-grass.

Description.—Fleshy perennial plant, from a large thick rootstock. Stem erect and simple. Leaves kidney-shaped. Flowers small, red or green, in terminal cluster.

Habitat and Occurrence.— On higher elevations throughout the Province.

Food Uses and Comments:— According to Fernald and Kinsey (1943), "The mountain-sorrel, which resembles a miniature rhubarb, with small rounded leaves, has always been highly esteemed in the Arctic regions as a 'scurvy-grass,' the new growth up to flowering time being eaten raw, when it tastes like a mild rhubarb and is a valuable addition to the diet. Cooked as a green the plant, we have found, is quite as good as the French sorrel, *Rumex acetosa*, and, like the latter plant, is especially attractive for a thick soup or puree. It is especially desirable as an ingredient of mixed alpine or arctic salads or potherbs, giving a pungent flavor. . . . Alaskan Indians are said to chop it with peppery cresses, while other tribes allow it to ferment as a sauerkraut."

Woolly Fernwood ***Pedicularis lanata***

Other Common Name.— Lousewort.

Description. — Perennial plant from a well-developed fleshy taproot. Leaves small, resembling fronds of fern. Flowers pink, in dense, white, woolly, elongated cluster.

Habitat and Occurrence.— Restricted to the northern tundra of our Province, where at higher elevations it is locally common.

Food Uses and Comments.— The sweet fleshy root is lemon coloured, and may be eaten raw or cooked like carrots. The flowering scapes, when young and cooked, can be used as a pot herb. As this plant is so abundant in the North and has a sizeable root, its use as a vegetable is highly recommended.

Plantain ***Plantago major***

Description.—Low perennial plant. Leaves broadly elliptical, strongly ribbed. Flowers in long, compact, elongated clusters; individual flowers very small, greenish.

Habitat and Occurrence. — Dry roadsides, fields and waste places everywhere.

Food Uses and Comments.—The leaves were formerly used as a pot herb and as a green vegetable. As this plant has tough fibres, most people would consider its use only in an emergency. Two large handfuls of the leaves infused for several hours in one quart of boiling water may be used in place of tea.

Seaside Plantain ***Plantago maritima***

Other Common Name.—Goose-tongue.

Description.—Perennial plant forming clumps. Leaves fleshy, linear, up to 1 foot tall. Flowers greenish, in insignificant elongated cluster. Fruit dry (capsule), opened by a cap which lifts off like a lid.

Habitat and Occurrence.—Salt marshes, rocky seashore, gravelly and sandy beaches along the Coast. Locally very common.

Food Uses and Comments.—Very few people realize the food value that seaside plantain offers as a green vegetable, and being very common and readily available on the Coast, it is worth noting. This plant is widely used in the East, being known under the name goose-tongue. The young fresh leaves should be washed, then cut and cooked like string beans. It also makes a good salad after dressing with oil and lemon.

Viviparus Knotweed ***Polygonum viviparum***

Other Common Name.— Alpine bistort.

Description. — Perennial plant with corm-like, scaly, thick rootstock. Leaves linear, green and shiny, very willow-like. Flowers white, small, in terminal elongated cluster.

Habitat and Occurrence.— Common in the northern part of the Province, in cool moist places, and wooded areas above timber-line.

Food Uses and Comments.— The fleshy rootstock is very starchy; it can be cooked and eaten as a substitute for nuts and raisins because of its almond flavour.

Silverweed ***Potentilla anserina***

Description.—Low perennial plant, with fleshy rootstock spreading by runners. Leaves feather-like, silvery beneath, green above, toothed. Flowers showy, bright yellow.

Habitat and Occurrence.—Moist areas along the Coast and wet soils in the Interior.

Food Uses and Comments.—The roots are edible and wholesome. It is said that, boiled or roasted, they taste like parsnips.

According to Fernald and Kinsey (1943), many of the root fibres are thickened and fleshy, and northern people as well as the American Indians are very fond of them, raw or cooked. In the early spring they are said to taste like sweet potatoes or parsnips.

Roseroot ***Sedum roseum***

Description.—Perennial, succulent plant from large and fleshy rootstock, which, when cut or bruised, produces a fragrance of attar-of-roses. Leaves fleshy, crowded, along the stem. Flowers pale yellow or reddish, in dense terminal cluster, followed by purple capsules.

Habitat and Occurrence.—Restricted mainly to the northern portion of the Province, where it occurs commonly on the higher elevations, in rather wet habitat, particularly where there is rich soil.

Food Uses and Comments.—The succulent young leaves and stems can be eaten raw as a salad or cooked as a pot herb. This plant is of great importance in the northern areas due to the scarcity of vegetables.

Sheep Sorrel ***Rumex acetosella***

Other Common Names.—Sorrel, field sorrel, sour grass.

Description.—Perennial plant with simple, erect stem from a fleshy rootstock, up to 1 foot tall. Leaves mainly basal, narrow, lobed at the base like an arrow, containing a sour juice. Flowers greenish or reddish, small, in loose terminal cluster.

Habitat and Occurrence.—Common in dry exposed fields and as a weed in neglected cultivated places. Very abundant on Vancouver Island and in southern parts of the mainland.

Food Uses and Comments.—The leaves of the young plant are very refreshing when eaten raw. They can be substituted for sour things and used in many different ways—in making delicious soups and sauces, as a seasoning for fish, rice, or potato, or mixed with other salad greens.

Recipes are found in many cook-books, especially in Europe, where this plant has a renowned reputation.

Fernald and Kinsey (1943) gives the following recipe for sorrel soup (for six): "Wash sorrel and put in saucepan with a little water (not covered). Cook slowly for about ½ hour. Put 4 cups of milk with small white onion (whole) in double boiler. Add 2 teaspoonfuls of butter and 2 tablespoonfuls of flour (thoroughly blended to avoid lumps) to the hot milk. Let stand, and add sorrel and strain. Season. Use about a handful (whose?) of the sorrel."

Glasswort ***Salicornia* species**

Other Common Name.—Chicken-claws.

Description.—Fleshy perennial plant with leafless, conspicuously jointed, juicy stem, bright green in summer, becoming red in fall. Flowers small, inconspicuous, hidden under scales.

Habitat and Occurrence.—Salt marshes and wet tidal flats in the Coastal area.

Food Uses and Comments.—The succulent stems make a pleasant salty salad or good pickle. As the plant is filled with brine, caution should be taken when seasoning. Spiced oil or vinegar should be used as a dressing.

Considering that this plant is very easy to identify, and also very abundant, it serves well as an emergency food.

Clover ***Trifolium* species**

Description.—Low perennial plant, leaves consisting of 3 leaflets. Flowers in dense head, white, pink, or red.

Habitat and Occurrence.—Meadows and bluffs everywhere.

Food Uses and Comments.—The roots are said to be sweet and pleasant. They may be partially dried and smoked, or rolled and dipped in oil. The leaves were used by Indians as a salad.

Arrow-head ***Sagittaria latifolia* and *S. cureata***

Other Common Names.—Arrow leaf, wapatoo, duck potato, swan potato.

Description.—Aquatic or marsh perennial plant, with tuber bearing fleshy rootstock and rosettes of sheathing basal leaves, up to 3 feet tall. Leaves erect, on long petioles, generally arrow-shaped. Flowers white, borne on the upper part of the naked stem, usually in clusters of 3.

Habitat and Occurrence.—Immersed in shallow waters of ponds, lakes, and borders of wet swamps or streams. Both species are widespread throughout most of the Province in suitable habitat. In some areas it has been introduced by planting to improve places for feeding waterfowl.

Food Uses and Comments.—In the fall the plant produces a hard potato-like tuber, at the end of long subterranean runners. These tubers, rich in starch, were an important food for some

Indian tribes. They should be boiled like potatoes or roasted in hot ashes. It is recommended to cook them for at least one-half hour and to peel them afterwards. It is also known that some Indians, after boiling the tubers, sliced them, dried and stored them like apples.

Dandelion ***Taraxacum* species**

Description. — Perennial plant from a thick taproot. Leaves elongate, coarsely toothed. Flowers yellow, in a solitary head. Stem leafless and hollow; when broken or bruised it discharges a white milky juice.

Habitat and Occurrence.—Common weed everywhere in field, garden, and roadsides.

Food Uses and Comments.—The young leaves may be used in a salad or cooked as greens. In cooking, change the water to remove bitterness. The roots sliced have also been used as an ingredient for salad. When dried, roasted, and ground, the roots may be used to make a beverage well known as a substitute for coffee. Roots are best dug in the fall.

According to Fernald and Kinsey (1943), "Like chicory the leaves of the dandelion may be blanched by covering during their rapid growth and then prepared as a salad; but the best salad from these plants is prepared from the cold, cooked greens thoroughly chilled, chopped, and served with a proper dressing."

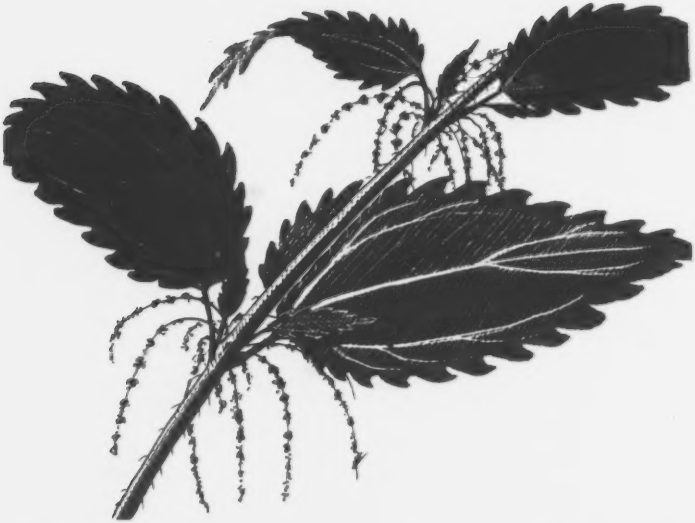
Cat-tail ***Typha latifolia***

Other Common Name.—Bulrush.

Description.—Tall perennial plant, from a thick rootstock. Leaves broad, sword-like. Flowers in a spike, resembling a compact bottle-brush or cat's tail.

Habitat and Occurrence.—In shallow water on margins of lakes and ponds throughout the Province.

Food Uses and Comments.—The young shoot should be stripped of its outer sheathing layer; the white tender part within makes a pleasant food. The central part of the rootstock may be dried, ground, and made into meal.



Nettle ***Urtica* species**

Description. — Tall perennial plant with simple erect stem. Leaves coarsely toothed, and with stinging bristles. Flowers very small, green, and inconspicuous, in the axil of opposite leaves.

Habitat and Occurrence. — Shady borders along streams, in woods along the Coast and in the Interior.

Food Uses and Comments.—The young shoots as they appear early in the spring may be boiled and used as a spinach. Nettle tea: One quart of boiling water to five large handfulls of young tips; infused for several hours.

According to Coon (1957), " Medicinally, in herbal practice, nettle tea was used freely as a blood purifier and as a possible cure for rheumatism.

"Another interesting use is as a fibre for textile purposes. In Britain nettle has been used as a substitute for flax and it is said as well, that an excellent paper may be made from these fibres."

MUSHROOMS AS FOOD

Many people mistakenly believe that there is great danger in eating any wild species of mushroom, of which several hundred are to be found in our Province. Mycologists who have studied them are of a different opinion and consider only a few to be poisonous; the majority are not only non-poisonous, but edible and, in some cases, delicious.

Mushrooms are not included in this handbook as they are a group of their own and require special treatment. Nevertheless, the present authors feel that a few words should be said about their uses as food.

However, those who are interested in mushrooms as a food should use caution, judgment, and do a little investigation. Existing literature will reveal a few simple, safe species which are not easily confused with any others. It is these with which the amateur should begin.

In discussing the edibility of this group the authors would like to make a few facts clear:—

There is no simple rule or test to distinguish edible from poisonous mushrooms. Beliefs to the contrary are more dangerour than complete ignorance, and persons who believe and rely on these " rules " may be misled into eating a poisonous species.

To eliminate the most poisonous group (*Amanita* spp.), we strongly recommend: (*a*) Avoid any white-gilled mushroom; (*b*) reject all mushrooms with a volva (a cap-like structure at the base of the stem); (*c*) avoid brightly coloured mushrooms. Some of the most attractive-looking forms are poisonous: *Amanita muscaria* (fly agaric), which is bright red or orange, the cap being covered with white warts; *Hygrophorus conicus*, a small, bright-orange mushroom; and *Russula emetica*, a rosy-red mushroom with white gills.

Do not eat mushrooms in the early stage of development (button stage) as the characters are not distinguishable.

Always make sure that mushrooms are fresh.

There is a choice of literature and official bulletins for those who have become interested in mushrooms. But our final word is *never eat a mushroom until you are sure of its identity.*

LICHENS AS FOOD

Lichens are one of the most common, interesting, and yet least-observed and least-known plants to many of us. They are of some importance in the field of economics. The history of their uses goes back as far as Biblical times, for it is believed that lichen was the "manna" of the Israelites. It is also a known fact that species of *Umbilicaria* and *Gyrophora*, called "tripe de roche," have been used by arctic peoples as a well-known source of food.

Of the many different species of lichens found in our Province, only one is actually poisonous, and only a very few are palatable to man. In general, lichens are rather tasteless and may contain irritating acids which must be leached out by parboiling in water to which baking-soda has been added. Porsild (1953) reports that after boiling with soda, lichens should be dried until brittle and then powdered. The powdered lichens, if put to macerate in water overnight, will jell when boiled with water or milk. Lichen jelly, a well-known food product in Iceland and northern Scandinavia, is mainly obtained from *Cetraria islandica*, commonly known as "Iceland moss."

Man does not use lichens as a source of food in the daily diet, but in times of emergency their uses are widely known.

SEAWEEDS AS FOOD

There are no poisonous species known among the seaweeds. Generally speaking, this group of plants is comparatively unimportant as a food to man, in its natural form. The main reason is their indigestibility and their high content of organic substances.

According to Scagel (1961), "The use of algæ in the human diet goes back into antiquity and seaweeds are still eaten and regarded as delicious in a number of countries. This is particularly true in countries bordering the western shore of the Pacific Ocean, and the Indian Ocean generally. However, in untreated

state, many of the seaweeds are not palatable." The same author states that the Indians of the Pacific Coast make use of certain local species of *Porphyra* which they collect along the rocks, usually in the early summer. They also eat the native species of sea lettuce or green laver *(Ulva)*. Another species which should be mentioned in connection with their food uses is *Nereocystis luetkeana*, used by Eskimos and Alaskan Indians, who manufactured from it a drink known as " hoochenoo." This species is also suitable for making pickles and candied peels from the fleshy stipe.

" Health food " in the form of pills or salts is produced from *Macrocystis integrifolia* and sold as a nutritional supplement. As seaweed contains a considerable amount of iodine, this kind of " health food " is often recommended for those inclined to goitre and other conditions due to iodine deficiencies.

People of the eastern States and Provinces of Canada, as well as some Europeans, use *Rhodymenia palmata*, known commonly as " dulse." Dulse is eaten raw, cooked, or chewed, and occasionally it is seen in our markets in dried form.

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